

## 1.1.4 Snubber Capacitors Axial Lead STP-01Q STP-01QE

### Applications :

- Protecting Thyristor against transient voltage and current
- Applications where high dv/dt is encountered
- SMPS Snubbing circuit

### Constructions :

- Axial Lead Configuration with Epoxy Resin ( UL94-V0 )sealed at both ends
- tin plated Copper Wire for PCB soldering
- STP-01QE can have Terminals at the Electrical Wire (page 26)

### Electrical Characteristics :

Capacitance : 0.01uF ~ 4.7uF at 1kHz +25C

Capacitance Tolerance : +/-5%(J), +/-10% (K)

Voltage Range :

600 Vdc	850 Vdc	1000 Vdc	1200 Vdc	1600 Vdc	2000 Vdc	3000 Vdc
275 Vac	450 Vac	500 Vac	500 Vac	630 Vac	630 Vac	750 Vac

**Test Voltage :** between Terminals :1.6xUn Vdc for 60s +25C

**Dissipation Factor :** < 0.1% at 1kHz +25C

**Rated Temperature :** -20C ~ +85C

Full rated voltage at 85C, derate linearly to 50% rated voltage at 105C.

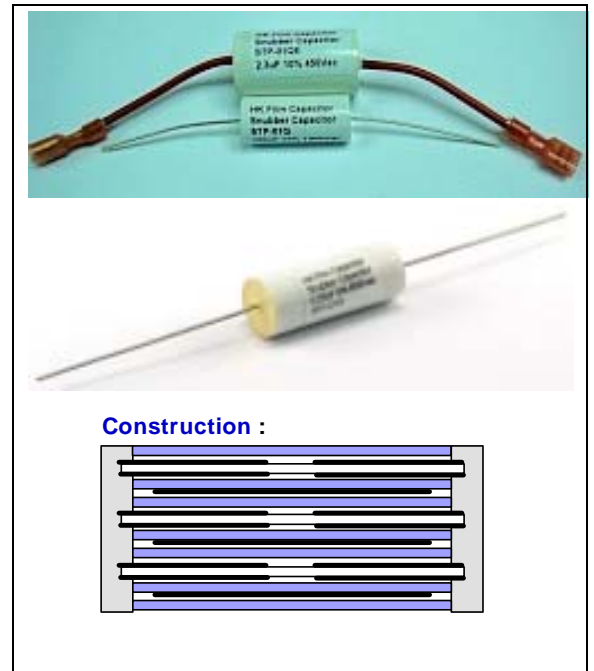
**Service Life :** 30,000 hours at rated Vac 70C  
60,000 hours at rated Vdc 70C

### Accelerated Life :

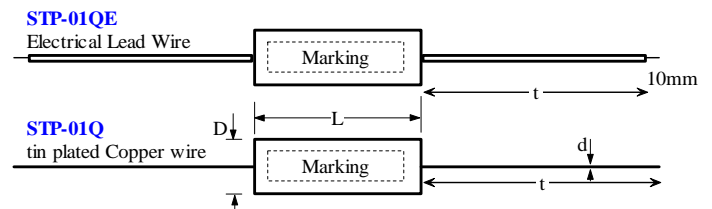
1.25 x rated DC voltage at 85C for 2,000 hours

**Insulation Resistance :** >100,000Mohm\*uF

at +25C 100Vdc 2minute.



**Construction :**



### STP-01Q Specifications and Size : 600Vdc / 275Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	9.0	0.8	28	19	195	19.5	2.5
0.15	34.0	10.5	1.0	13	20	195	29	4.0
0.22	34.0	11.5	1.0	12	20	195	43	4.4
0.33	34.0	13.5	1.0	9	21	195	64	5.6
0.47	34.0	15.5	1.0	7	22	195	91	6.9
0.68	34.0	18.0	1.0	6	23	195	132	8.0
1.00	34.0	21.0	1.0	6	24	195	195	8.9
1.50	34.0	25.0	1.2	5	26	195	293	10.0
2.00	46.0	23.5	1.2	5	31	128	256	11.0
3.30	54.0	27.0	1.2	4	36	105	346	15.0
4.70	54.0	32.5	1.2	4	38	105	490	16.5

### STP-01Q Specifications and Size : 850Vdc / 450Vac

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.15	34.0	13.0	1.0	8	21	710	106	5.5
0.22	34.0	15.5	1.0	8	22	710	156	6.3
0.33	34.0	18.0	1.0	7	23	710	234	7.3
0.47	34.0	21.0	1.0	5	24	710	333	9.5
0.68	34.0	24.5	1.2	4	26	710	483	12.0
1.0	46.0	22.5	1.2	5	30	400	400	11.4
1.5	46.0	27	1.2	4	32	400	600	14.0
2.0	46.0	31	1.2	3	34	400	800	17.5
2.2	46.0	32	1.2	3	34	400	880	18.0
2.5	46.0	34	1.2	3	35	400	1000	19.0

**STP-01Q Specifications and Size : 1000Vdc / 500Vac**

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.15	34.0	15.0	1.0	7	22	855	128	6.5
0.22	34.0	17.5	1.0	7	23	855	188	7.5
0.33	34.0	21.0	1.0	6	24	855	280	8.8
0.47	34.0	24.0	1.2	5	26	855	400	10.5
0.68	34.0	28.0	1.2	5	27	855	580	11.5
1.0	46.0	26.0	1.2	5	32	480	480	12.5
1.5	46.0	31.0	1.2	4	34	480	720	15.3
2.0	46.0	36.0	1.2	3	36	480	960	19.0

**STP-01Q Specifications and Size : 1200Vdc / 500Vac**

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	15.5	1.0	9	22	1140	114	6
0.15	34.0	18.5	1.0	7	23	1140	170	7.5
0.22	34.0	22.0	1.0	7	24	1140	250	8.2
0.33	46.0	20.0	1.0	7	29	640	210	9
0.47	46.0	23.0	1.2	7	30	640	300	9.8
0.68	46.0	27.0	1.2	6	32	640	435	11.5
1.0	46.0	33.0	1.2	5	35	640	640	14.1
1.5	54.0	35.0	1.2	4	39	500	750	17.9

**STP-01Q Specifications and Size : 1600Vdc / 630Vac**

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.10	34.0	18.0	1.0	7	25	1425	140	7.0
0.15	34.0	22.0	1.0	5	24	1425	210	9.9
0.22	34.0	26.0	1.2	7	26	1425	310	9.0
0.33	46.0	24.0	1.2	7	31	800	260	10.0
0.47	46.0	28.0	1.2	6	32	800	375	11.5
0.68	46.0	33.0	1.2	6	35	800	540	13.0
1.00	46.0	39.0	1.2	5	37	800	800	16.0
1.50	54.0	42.0	1.2	4	42	625	940	20.0
2.00	64.0	43.0	1.2	3	45	470	940	21.0

**STP-01Q Specifications and Size : 2000Vdc / 630Vac**

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.022	34.0	12	1.0	35	6	1710	37	2.5
0.033	34.0	14	1.0	20	21	1710	56	3.6
0.047	34.0	15	1.0	12	22	1710	80	5.0
0.068	34.0	18	1.0	8	23	1710	116	6.6
0.10	34.0	21	1.0	7	24	1710	170	8.0
0.15	46.0	20	1.0	7	29	960	141	8.6
0.22	46.0	22	1.0	8	30	960	210	9.0
0.33	46.0	27	1.2	8	32	960	316	10.0
0.47	46.0	32	1.2	6	34	960	451	13.0
0.56	54.0	31	1.2	7	37	754	420	12.4
0.68	54.0	34	1.2	6	39	754	512	14.0
1.00	54.0	41	1.2	5	42	754	750	17.3

**STP-01Q Specifications and Size : 3000Vdc / 750Vac**

Capacitance uF	Length Mm	Diameter mm	Copper Wire d mm	ESR mohm	ESL nH	dv/dt v/us	Ipeak A 70C	Irms A 70C
0.01	34.0	12	1.0	60	20	2568	25	2
0.015	34.0	14	1.0	40	21	2568	38	2.5
0.022	34.0	16	1.0	25	22	2568	56	3.5
0.033	34.0	18	1.0	14	23	2568	84	5.0
0.047	46.0	17	1.0	14	28	1440	67	5.5
0.068	46.0	19	1.0	12	29	1440	98	6.5
0.10	46.0	23	1.2	10	30	1440	140	8.0
0.15	46.0	27	1.2	8	32	1440	210	10